

TRI·SPORT

OWNER'S MANUAL

RTS SERIES



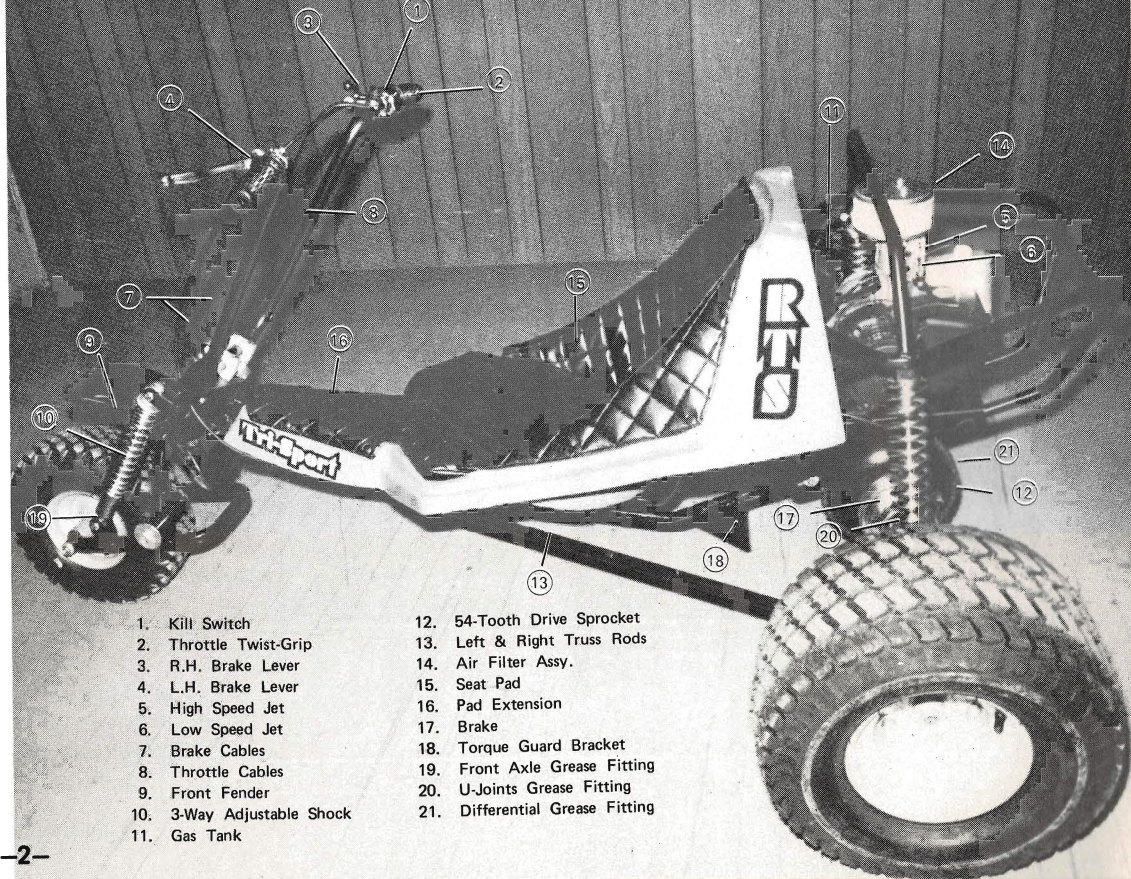
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A WORD TO TRI-SPORT OWNERS

Read your owner's manual carefully. The life of your Tri-Sport depends on the breaking-in of the engine and the way in which it is treated. Greater care taken in the early life of your machine will insure a longer life, greater dependability and better performance. Attention to proper maintenance and service after this critical breaking-in period will keep your Tri-Sport operating at peak performance level.

Alsport, Inc.
84 Whittlesey Ave.
Norwalk, Ohio 44857



- | | |
|----------------------------|---------------------------------|
| 1. Kill Switch | 12. 54-Tooth Drive Sprocket |
| 2. Throttle Twist-Grip | 13. Left & Right Truss Rods |
| 3. R.H. Brake Lever | 14. Air Filter Assy. |
| 4. L.H. Brake Lever | 15. Seat Pad |
| 5. High Speed Jet | 16. Pad Extension |
| 6. Low Speed Jet | 17. Brake |
| 7. Brake Cables | 18. Torque Guard Bracket |
| 8. Throttle Cables | 19. Front Axle Grease Fitting |
| 9. Front Fender | 20. U-Joints Grease Fitting |
| 10. 3-Way Adjustable Shock | 21. Differential Grease Fitting |
| 11. Gas Tank | |

IMPORTANT OPERATING AND SAFETY INSTRUCTIONS

STARTING PROCEDURE

1. Check oil on 4-cycle engines, making sure the proper amount is showing, on dipstick.
2. Make sure that the proper grade gas and gas/oil mixture is being used, in all 2 cycle engines. Insure proper weight and amount of oil is in 4 cycle engines.
3. Do not start the engine before checking throttle, which should be in the idle position.
4. Make sure the safety switch is in "ON" position.
5. Choke must be in "ON" position to start a cold engine.
6. If a foam type air cleaner is used, insure it is pre-oiled with SAE 30 motor oil.
7. To avoid the possibility of unit taking off under it's own power, put front wheel up against a tree or other stationary object. Keep everyone away from front of Tri-Sport.
8. Firmly grip the recoil rope giving a quick hard pull (particularly important in starting the McCulloch engine because of the high compression). Shut off choke as soon as engine kicks over.
9. Allow engine to warm up before taking off. (Four-cycle engines are equipped with a choke that may be operated at an intermediate position.)

FUEL & OIL RATIOS

Fuel	RTS-5	RTS-8	RTS-Mac	RTS-290	RTS-340
	No Lead - Regular				
Oil Winter	SAE 10			2-cycle	
Oil Summer	SAE 30			2-cycle	

Do not mix oil and gas in 4-cycle engines.

Two-cycle fuel must be pre-mixed with two-cycle oil. Mix oil and gas in separate can, not in tank of unit.

The ratio recommended by the engine manufacturer is 20:1. However, you can follow the oil company's mixture recommendations.

Slightly more oil should be used for the break-in period of about 5 hours. A 15:1 ratio is recommended. For best results, mix oil and gas at 50°-75°, or room temperature.

NEW ENGINE

If 6 or 7 pulls fail to start your new engine after putting the recommended gas/oil mixture in your 2-cycle Tri-Sport and choking to start it, we recommend taking off the air cleaner and putting your hand over the ventura of the carburetor, sealing off all air in order to

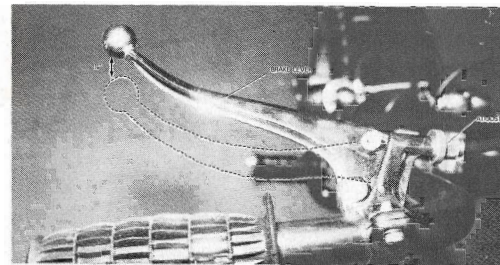
get the gasoline into the cylinders. If you don't feel any suction on your hand from the carburetor, make sure that the pulseline is connected; check the spark.

BRAKE ADJUSTMENT

About ¼" of play should exist at the tip of the brake lever after the front brake cable has been adjusted. It is done by means of the adjuster allen cap screw on the brake band on the axle. The best method of adjusting is to use welder's vicegrip, pliers to hold the brake band tight while you loosen and retighten the allen cap screw.

Turn the adjustment screw in a counter-clockwise direction to remove slack from the cable housing. Turn circular adjustment nut in a clockwise direction to adjust the brake, always checking to make sure the wheels turn freely.

The RTS-290 & 340 have hydraulic brakes which are self-adjusting.



CHAIN ADJUSTMENT

Adjust the chain so that there is about ½" slack on the chain. This is done by turning the chain idler sprocket down to tighten, and up to loosen.

Caution: Do not over-tighten the chain as it could cause breakage and unnecessary wear.

CARBURETION

The carburetor on the 290 & 340 is a Tillotson diaphragm-type carburetor. The Mac 101 is similar, but the settings differ.

Preliminary Adjustment

1. Close the main and idle fuel adjustment needles (turn clockwise until they just seat.)

Caution: Do not jam the needles into their seat beyond the point of resistance. This will damage the needles and the carburetor body beyond repair.

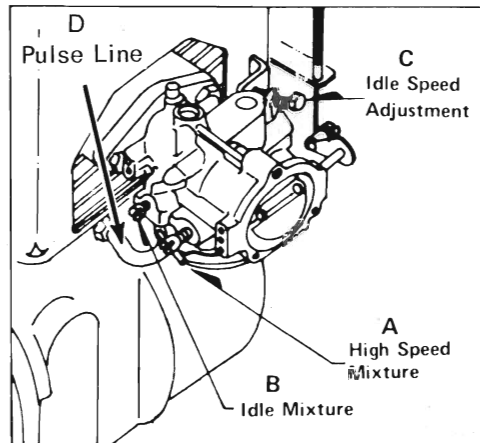
2. Open the main fuel adjustment needle (turn counter-clockwise) 1½ to 2 turns on the Mac and 1¼ turns on the 290 & 340. Open the idle fuel adjustment needle 1-1½ turns on the Mac and ¾-1 on the 290 & 340.

3. Start the engine and warm it up to operating temperature.

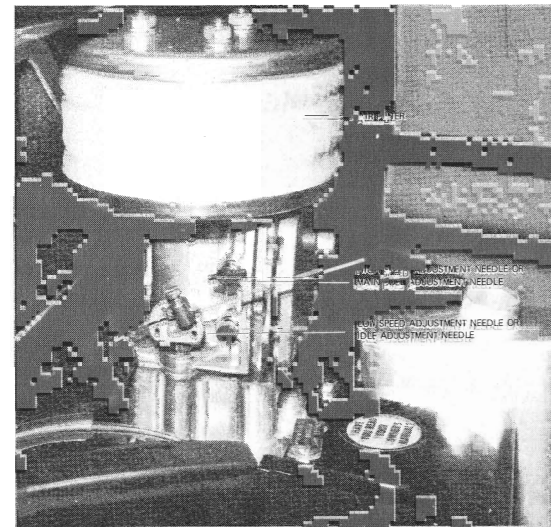
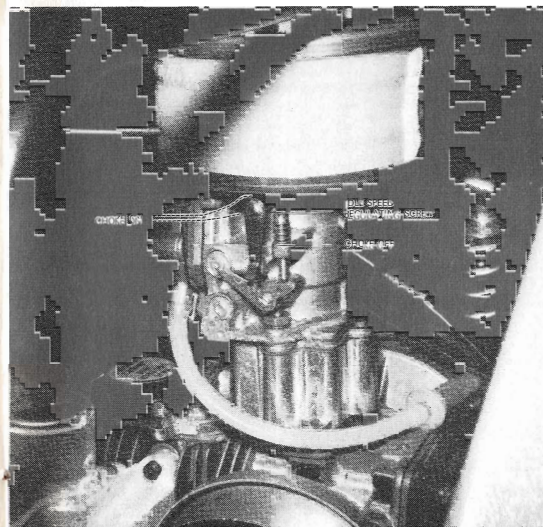
4. Adjust the idle-speed adjusting screw until the engine runs smoothly at the lowest speed with the throttle off.

5. Finally, test the engine performance at high speed or full throttle. Adjust the main fuel needle by opening the needle (turning counter-clockwise) until the engine begins to four-cycle (firing every other stroke) at a maximum RPM. Close the needle by turning clockwise only 1/16" at a time to lean the mixture just enough to return to two-cycling at full throttle.

CARBURETOR RTS 290 - 340



- A. High Speed Mixture Screw
- B. Idle Mixture Screw
- C. Idle Speed Adjustment Screw
- D. Pulse Line



MAINTAINING YOUR RTS

Proper lubrication of your unit is important. Make sure oil changes are made after 10-20 hours of running and the air filter is serviced every 5-10 hours. For long engine life and best performance, top off grease fittings every 10-20 hours and lubricate and retighten chain every 5 hours. Grease wheel bearings and U-joints, making sure you don't overgrease, as this will cause seals to fracture.

Always use a clean can (NOT your fuel tank) when mixing the gasoline and oil for your fuel mixture. Shake the can well until the gas and oil are thoroughly mixed. Since gasoline evaporates easily while oil doesn't, your mixture may have the wrong ratio if it's not used within a few days.

It's a good idea to go over the engine after each day of running and make sure that all bolts and screws are tight. The engine mounting bolts are particularly liable to be loosened by vibration, so these should be checked often. Should the engine work loose, the castings are sure to be damaged.

You may find that by not using an air filter in the carburetor intake system you gain some extra power output. But, the small amount of power gained is an expensive price to pay for the resulting higher rate of engine wear and the possibility of your spark plug shorting out (from dirt on the electrodes) at a critical moment.

Make sure your spark plug is clean and that the electrodes are gapped properly and aren't too worn. A faulty plug in a one-cylinder engine is much more trouble-some than one in a multi-cylinder engine.

Always keep your chain adjusted to the manufacturer's recommendations. Check both engine and wheel sprockets often to make sure that the teeth aren't wearing because of a loose chain. A worn or loose chain can de-tooth sprockets in a short time. Dirty chain can result in a 10 to 20% power loss. Keep your chain clean and well lubricated.

TROUBLE-SHOOTING

1. ENGINE FAILS TO START

- A. Check spark
- B. Make sure engine is getting fuel
- C. Check all wires and connections
- D. Make certain safety switch is not malfunctioning

E. Check points and condenser

2. ENGINE MISFIRE

- A. Check carburetor adjustment
- B. Spark plug shorting
- C. Wires not shorting out
- D. Safety switch ok
- E. Check coils and condenser

3. ENGINE WILL NOT IDLE

- A. Low speed fuel adjustment needle set too lean
- B. Fuel filter dirty
- C. Idle speed screw set too lean or too rich
- D. Fuel inlet control lever set incorrectly
- E. Fuel passage clogged
- F. Throttle control arm not adjusted properly
- G. Sticking fuel inlet valve needle or fuel inlet control lever
- H. Diaphragm air-bleed passage plugged
- I. Fuel tank not vented

4. CARBURETOR FLOODS

- A. Dirt or foreign particles preventing inlet needle from setting
- B. Stuck fuel inlet control lever
- C. Spring not seated on inlet control lever
- D. Carburetor diaphragm improperly installed
- E. Fuel tank not venting; pressure build-up in fuel tank
- F. Diaphragm air-bleed passage plugged
- G. High and/or low fuel adjustment needles damaged.

5. ENGINE WILL NOT ACCELERATE

- A. High speed needle set too lean
- B. Fuel inlet control lever set too low
- C. Carburetor loose on engine
- D. Fuel or pulse passages clogged
- E. Diaphragms leaking
- F. Fuel pump body diaphragm plate or diaphragms loose

6. THROTTLE AND BRAKE CABLES STICKING OR HARD TO OPERATE

- A. Check cable for dirt or ice
- B. Check twist grip for dirt or ice
- C. Check linkage
- D. Use dry lubricant

7. CLUTCH MALFUNCTION

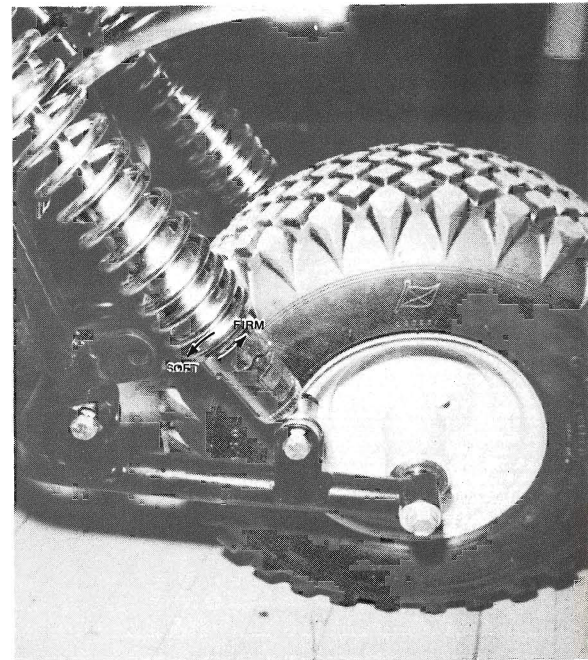
- A. Excessive belt wear
- B. Check alignment and center distance
- C. Disassemble and check springs and liner spline (check for excessive wear)
- D. Clean and lubricate; use a dry lubricant

8. EXCESSIVE CHAIN NOISE

- A. Check alignment
- B. Chain tension
- C. Lubricate; use a dry lubricant

SHOCK ABSORBERS

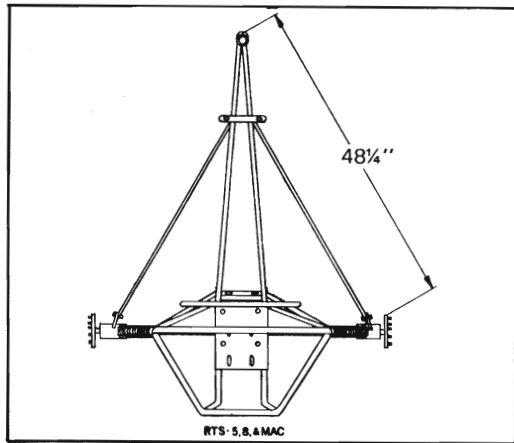
The shock absorbers are adjustable. There are three adjustment, soft, medium and firm. This can be made by turning them counter-clockwise for the firmest ride.



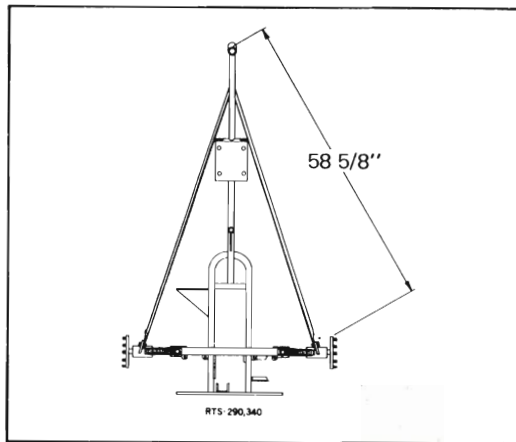
ADJUSTMENT OF TORQUE ARMS

Proper adjustment of the torque arms is important as this can affect the handling characteristics of your Tri-Sport.

The RTS 5, 8 & MAC is measured in the same way as the RTS 290 - 340, differing only in the distance between point A & B.



To increase the distance turn the torque arm end clockwise. To decrease turn counter clockwise. The distance is measured from the front fork to the rear wheel hub (you must remove the rear wheel in order to attain the proper distance).



A WORD ABOUT THE RTS WARRANTY

Please familiarize yourself with the warranty policy which covers your new RTS Tri-Sport and is indicated on the following page. All units and component parts are fully warranted against failure in compliance with the terms set forth by Alsport and our respective suppliers. The engines with the exception of Kohler and McCulloch are covered by their respective manufacture. The Kohler engine warranty will be handled by Alsport. The only items on the Tri-Sport which are not covered by Warranty are drive belts, seat cushions, or spark plugs.

NOTICE

The McCulloch RTS engine is sold on an "as is" basis, the entire risk as to the quality and performance of the engine is with the purchaser and should the product prove defective following purchase, the purchaser and not McCulloch assumes the entire cost of all necessary servicing and repair.

The warranty period as spelled out in the warranty policy is for 90 days from the original date of sale. The fact that our product is repaired or replaced during the original 90 day warranty period does not extend the expiration date of the original warranty, due to any loss of time because of any failures.

No vehicle will be considered under warranty unless the warranty registration card has been properly filled out and has been mailed to Alsport. Four cycle engine repair or service will be done by an authorized Tecumseh or Briggs & Stratton repair station.

ALSPORT, INC. WARRANTY

For ninety days from purchase date, Alsport, Inc. will replace free of charge, any part or parts found, upon examination by an authorized Alsport Recreational Vehicle Dealer or by our Technical Service Director, to be defective in material and/or workmanship.

All transportation or labor charges on parts submitted for warranty shall be borne by the purchaser.

This warranty shall not apply to the Company's products which must be replaced or repaired due to normal wear, misuse, negligence or accident, competitive racing, rental purposes, or which have been altered or modified by the addition of parts, mechanisms or equipment or otherwise modified in any manner except upon the express prior written authorization of Alsport, Inc.

There is no other warranty expressed or implied and the Company shall be under no liability whatsoever in respect of any loss, damage, injury or expense arising from any defect in said product or products.

Do not return any parts to the Company without prior authorization.

	Briggs & Stratton	Tecumseh	McCulloch	280 CCW	340 CCW	280 Kohler	340 Kohler
Horsepower	5hp 3600	8hp 3800	14.5hp 9500	23hp 6500	25hp 5800	24hp 6500	28hp 6500
Max. Torque	7.2 ft. lbs. 3600	10.8 ft. lbs. 3600	105 in. lbs. 8000	18.2 ft. lbs. 6000	23 ft. lbs. 5250	20 in. ft. lbs. 5800	23 in. ft. lbs. 6200
Bore	2 9/16"	3 1/16"	2.280"	58.5mm	60mm	57.5mm	62mm
Stroke	2 7/16"	2 17/32"	1.835"	54.0mm	60mm	56mm	56mm
Displacement	12.52cu. in.	18.65cu. in.	123cc	290cc	340cc	295cc	340cc
Carburetor	Briggs & Stratton	Float bowl w/fuel pump	Mac 101 Walbro	Tillotson			
Fuel Capacity	1/2 gal.	1 gal.	1 gal.	1 1/2 gal.	1 1/2 gal.		
Front Suspension	Leading Link 3-Way Adjustable Shocks						
Rear Suspension	Independent Universal Joint 3-Way Adjustable Shocks						
Jackshaft Sprocket	10T						
Rear Sprocket	54T						
Differential	Limited Slip Differential						
Torque Converter	Comet	Hortsmán	Hortsmán	Salsbury	Salsbury		
Frame Type	Tubular Space Frame						
Length	77"	77"	77"	88"	88"	88"	88"
Width				53"			
Height				29"			
Ground Clearance	5"						
Approx. Weight	170 lbs.	175 lbs.	195 lbs.	265 lbs.	275 lbs.	265 lbs.	270 lbs.
Front Tires	5.30 x 4.50 x 6						
Rear Tires	18 x 9.50 x 8						
Brakes	Band Type				Hydraulic Disc		
Champion Plug	CJ-8	J-8	L-7B	L3G	L3G	L3G	
Carb. Adjustment	High 1 1/2 Low 1 1/4	High 2 Low 2	High 1 1/2-2 Low 1-1 1/4	High 1 1/2 Low 3/4-1	High 1 1/2 Low 3/4-1		
Breaker Point Gap	.020"	.018-.020"	.018-.020"	.020"BTDC	.015"BTDC		
APP. Clutch Centers	9 1/2"	12"	8 1/2"	10 1/2"	10 1/2"	10 1/2"	10 1/2"
Tire Pressure	Front & Rear 5 - 8 lbs.						